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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,943	08/20/2001	Shigeru Nakamura	500.40513X00	5922

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EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/913,943

Applicant(s)

NAKAMURA ET AL.

Examiner

Jorge L Ortiz-Criado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “setting portion” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

Correction of the following is required: The subject matter “setting portion” should be identified in the descriptive portion of the specification by reference to the drawing.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Kajiyama et al.

U.S. Patent No. 6,522,990.

Regarding claim 1, Kajiyama et al. discloses an optical information recording and reproduction apparatus (See Abstract; Fig. 2), comprising:

a setting portion of an optical information medium (Fig. 2);

a light source where a plurality of semiconductor laser chips are mounted on an identical surface (See col. 7, lines 50-55; col. 9, line 1-20; Figs. 2- #1a,1b; 4-#1c)

optical convergence means for converging each of a plurality of laser beams radiated from each of laser chips into an optical spot on said optical information medium when the optical information medium is set to said setting portion (See col. 7, lines 50-67; Fig. 2); and

tracking servo means for moving the optical convergence means in a tracking servo direction perpendicular to a track direction such that the optical spot accurately scans the track of the optical information medium (See col. 8, lines 18-33; Fig. 2,3),

wherein a direction of alignment of said plurality of semiconductor laser chips is substantially perpendicular to the tracking servo direction (See col. 9, lines 1-20; Fig2. 2,4)

Regarding claim 6, Kajiyama et al. discloses an optical head used in an optical information recording and reproduction apparatus that performs tracking servo to record and

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reproduces information when an optical spot is radiated on an optical information medium (See col. 7 line 50 to col. 8, line 39; Figs. 2,3), wherein the optical head comprises:

a light source on which each of semiconductor laser chips having a plurality of wavelengths is mounted on an identical surface (See col. 7, lines 50-55; col. 9, line 1-20; Figs. 2-#1a,1b; 4-#1c);

and optical convergence means for converging each of a plurality of laser beams radiated from each of the laser chip on said optical information medium as the optical spot (See col. 7, lines 50-67; Fig. 2), and

a direction of alignment of said plurality of semiconductor laser chips is substantially perpendicular to said tracking servo direction (See col. 9, lines 1-20; Fig2. 2,4)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2-5 and 7-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Kajiyama et al. U.S. Patent No. 6,522,990 in view of Uchizaki et al. U.S. patent No. 6,646,975

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Regarding claim 2, Kajiyama et al. discloses an optical information recording and reproduction apparatus (See col. 7 line 50 to col. 8, line 39; Figs. 2,3) that comprises:

a first reflection plane that reflects the laser beams radiated from each of a plurality of the semiconductor laser chips (See col. 7, liners 62-65; Fig. 2-# 2) and

a second reflection plane that guides the laser beams from the first reflection plane to the optical convergence means (See col. 7, liners 62-65; Fig. 2-# 4),

Kajiyama et al. fails disclose wherein the first reflection plane is formed on the same plate as the mount surface for the laser chips.

However this feature is well known in the art as evidenced by Uchizaki et al., which discloses an optical information recording and reproduction apparatus having a first reflection plane that reflects the laser beams radiated from each of a plurality of the semiconductor laser chips wherein the first reflection plane is formed on the same plate as the mount surface for the laser chips (See col. 12, line 34 to col.13 line 8; Fig. 8)

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to make a first reflection plane formed on the same plate as the mount surface for the laser chips, in order to enable realization of a very thin and compact optical unit by integrating the semiconductor chips as suggested by Uchizaki et al.

Regarding claim 3, The combination of Kajiyama et al. with Uchizaki et al. would show wherein the laser beams from the first reflection plane is made to be incident from the tracking servo direction to the second reflection plane, and a plurality of the semiconductor laser chips are

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arranged in an inner plane direction parallel to an optical information medium plan (See Kajiyama et al. col. 7, liners 62-65; col. 9, lines 1-20; Figs. 2,4).

Regarding claim 4, The combination of Kajiyama et al. with Uchizaki et al. would show wherein the laser beams from the first reflection plane is made to be incident from the track direction to the second reflection plane, and a plurality of the semiconductor laser chips are arranged in an inner plane direction perpendicular to the optical information medium plane (See Kajiyama et al. col. 7, liners 62-65; col. 9, lines 1-20; Figs. 2,4).

Regarding claim 5, 7 and 10, Kajiyama et al. discloses all the limitations based on claim 1 and 6 as outlined above.

Kajiyama et al. discloses a first reflection plane for reflecting the laser beam radiated from each of a plurality of the semiconductor laser chips; and a second reflection laser beam from the first optical convergence means plane (See Kajiyama et al. col. 7, liners 62-65; col. 9, lines 1-20; Figs. 2,4)

Kajiyama et al. fails to disclose wherein photodetecting elements for receiving each of a plurality of the laser beams radiated from each of the laser chips are provided on a surface where said laser chips are mounted and wherein the first reflection plane is formed on the same plate as the mount surface for the laser chips

However this feature is well known in the art as evidenced by Uchizaki et al., which discloses an optical information recording and reproduction apparatus having a first reflection plane that reflects the laser beams radiated from each of a plurality of the semiconductor laser

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chips wherein the first reflection plane is formed on the same plate as the mount surface for the laser chips and wherein photodetecting elements for receiving each of a plurality of the laser beams radiated from each of the laser chips are provided on a surface where said laser chips are mounted (See col. 12, line 34 to col.13 line 8; Fig. 8).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to make a first reflection plane formed on the same plate as the mount surface for the laser chips, in order to enable realization of a very thin and compact optical unit by integrating the semiconductor chips and the photodetectors as suggested by Uchizaki et al.

Regarding claim 8, The combination of Kajiyama et al. with Uchizaki et al. would show wherein the laser beams from the first reflection plane is made to be incident from the tracking servo direction to the second reflection plane for guiding the reflection plane to the wherein the first reflection same as the mount surface plane, and a plurality of the semiconductor laser chips are arranged in an inner plane direction parallel to an optical information medium plane (See Kajiyama et al. col. 7, liners 62-65; col. 9, lines 1-20; Figs. 2,4).

Regarding claim 9, The combination of Kajiyama et al. with Uchizaki et al. would show wherein the laser beams from the first reflection plane is made to be incident from the track direction to the second reflection plane, and a plurality of the semiconductor laser chips are arranged in an inner plane direction perpendicular to the optical information medium plane (See Kajiyama et al. col. 7, liners 62-65; col. 9, lines 1-20; Figs. 2,4).

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5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. J.P. Pub. No. 10-021577 to Yonekubo Masatoshi, which discloses a light source where a plurality of semiconductor laser chips are mounted on an identical surface, a reflection plane formed on the same plate as the mount surface for the laser chips and photodetecting elements for receiving each of a plurality of the laser beams radiated from each of the laser chips are provided on a surface where said laser chips are mounted for an optical information recording/reproducing device.

b. J.P. Pub. No. 10-027374 to Takeda et al., which discloses an optical information recording/reproducing device a light source where a plurality of semiconductor laser chip is mounted on an identical surface, a reflection plane formed on the same plate as the mount surface for the laser chips, a second reflection plane that guides the laser beam from the first reflection plane to an optical convergence portion, photodetecting elements for receiving each of a the laser beam radiated from laser chip provided on a surface where said laser chip is mounted and wherein a direction of alignment of said semiconductor laser chip is substantially perpendicular to the tracking servo direction.

c. U.S. Patent No. 5,600,619 to Takekoshi et al., which discloses an optical information recording/reproducing device a light source where a plurality of semiconductor laser chip is mounted on an identical surface, a reflection plane formed on the same plate as the mount surface for the laser chips, a second reflection plane that guides the laser beam from the first reflection plane to an optical convergence portion,

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photodetecting elements for receiving each of a the laser beam radiated from laser chip provided on a surface where said laser chip is mounted and wherein a direction of alignment of said semiconductor laser chip is substantially perpendicular to the tracking servo direction.

Conclusion

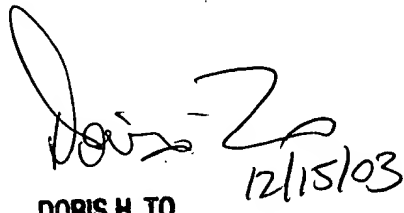
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323.

The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm),Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6743.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

joc


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